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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,011	09/25/2006	Ikuo Yamamoto	Q97191	6195
23373 7590 05/30/2008				
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SUITE 800				
WASHINGTON, DC 20037				
EXAMINER				
BUIE, NICOLE M				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
05/30/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/594,011

Applicant(s)

YAMAMOTO ET AL.

Examiner

NICOLE M. BUIE

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/02)
- Paper No(s)/Mail Date 20060925/20070501
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code [0006]. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 7- 12 rejected under 35 U.S.C. 102(b) as being anticipated by Coover, Jr. et al. (US 2,521,902).

Regarding claim 1, Coover, Jr et al. discloses (1) a fluorine-containing polymer (C5/L32-36) and (2) water and/or organic solvent (C5/L10-22), characterized in that the fluorine-containing polymer comprises repeating units derived from a fluorine-containing compound of the formula (I), wherein X is hydrogen atom or methyl group, Y is NH, and p is 0 (C2/L6-24).

However, Coover, Jr. et al. does not disclose a surface treatment agent. Since Coover, Jr. et al. does disclose fluorine containing polymer substantially identical to the instant claim, the claimed properties of the fluorine-containing polymer would have the same results as the prior art, absent objective evidence to the contrary. “Products of identical chemical composition

cannot have mutually exclusive properties.” A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F. 2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). See MPEP 2112.01.

Regarding claim 2, Coover, Jr. et al. further discloses the surface treatment agent which is in the form of a solution or emulsion (C5/L10-23).

Regarding claim 7, Coover, Jr. et al. discloses a fluorine-containing compound (a) of the formula (I) (C2/L6-24), wherein X is a hydrogen atom or methyl group, Y is NH, and p is 0.

Regarding claim 8, Coover, Jr. et al. further discloses the fluorine-containing compound wherein the carbon number of the fluoroalkyl group (Rf group) is 1 (C2/L6-24).

Regarding claim 9, Coover, Jr. et al. further discloses the fluorine-containing compound wherein the fluoroalkyl group (Rf group) is a perfluoroalkyl group (C2/L6-24).

Regarding claim 10, Coover, Jr. et al. further discloses a fluorine-containing polymer comprising (A) repeating units derived from the fluorine-containing compound (a) (C5/L10-35).

Regarding claim 11, Coover, Jr. et al. further discloses the fluorine-containing polymer further having (B) repeating units derived from (b) a monomer free from a fluorine atom (“acrylonitrile” or “methyl α -methacrylate”, C5/L50-69, C6/L59-73).

Regarding claim 12, Coover, Jr. et al. further discloses the fluorine-containing polymer wherein the fluorine atom-free monomer (b) forming the repeating units (B) is acrylates of the general formula: $\text{CH}_2=\text{CA1COOA2}$ (C6/L59-73).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohmori et al. (US 5,069,941).

Regarding claim 1, Ohmori et al. discloses a surface treatment agent (Abstract, C1/L9-10) comprising (1) a similar fluorine-containing polymer (C1/L44-64, C2/L63-67) and (2) water or an organic solvent (C4/L27-34, C4/L59-668, C5/L12-20). Ohmori et al. discloses a similar compound with seven or eight carbon atoms in the fluoroalkyl group (C2/L67, C6/L47), n is 2,

and X is methyl.

However, Ohmori et al. does not disclose the specific fluorine-containing compound of formula (I), wherein Rf is a fluoroalkyl group having 1 to 6 carbon atoms. It would have been obvious to one of ordinary skill in the art at the time the invention was made to decrease the number of carbons in the fluoroalkyl group to increase solubility. An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound in the expectation that compounds similar in structure will have similar properties. *In re Payne*, 606 F. 2d 303, 313, 203 USPQ 245, 254 (CCPA 979). See *In re Papesch*, 315.2d 381, 137 USPQ 43 (CCPA 1963) and *In re Dillon*, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991). See MPEP 2144.09.

Regarding claim 2, Ohmori et al. further discloses the surface treatment agent which is in the form of a solution (C4/L44-58) or emulsion (C5/L12-20).

Regarding claim 3, Ohmori et al. further discloses a method of treating a substrate with the surface treatment agent (C4/L44-58).

Regarding claim 4, Ohmori et al. further discloses the method wherein the substrate is a textile (C5/L21-25).

Regarding claim 5, Ohmori et al. further discloses a textile treated with the surface treatment agent (C5/L21-25).

Regarding claim 6, Ohmori et al. further discloses a carpet treated with the surface treatment agent (C5/L21-25).

5. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Coover, Jr. et al. (US 2,521,902) as applied to claim 11 above.

Regarding claim(s) 14, Coover, Jr. et al. teaches the basic claimed composition as set forth above. Coover, Jr. et al. further discloses the fluorine-containing polymer comprises the fluorine atom-free monomer (b) is 25 to 95% by weight (as compared to 0.1 to 50 parts by weight as required by said claim) (C7/L73-C8/L13) and the amount of the crosslinkable monomer (c) is 0 parts by weight (as compared with at most 20 parts by weight as required by said claim) (C7/L73-C8/L13). It would have been obvious to one of ordinary skill in the art at the time of invention to have selected the overlapping portion of the ranges disclosed by the reference because overlapping ranges have been held to be a prima facie case obvious. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP § 2144.05.

6. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over Coover Jr. et al. (US 2,521,902) in view of Babirad et al. (US 5,239,026).

Regarding claim 13, Coover, Jr. et al. does not disclose the fluorine-containing polymer wherein the crosslinkable monomer (c) forming the repeating units (C) is a fluorine-free monomer having at least two reactive groups and/or carbon-carbon double bonds. Babirad et al. teaches the crosslinkable monomer (c) forming the repeating units (C) is a fluorine-free monomer having at least two reactive groups and/or carbon-carbon double bonds. Coover, Jr. et al. and Babirad et al. are related to analogous art of fluorine-containing polymers comprising acrylate monomers. Therefore, it would have been obvious to one of ordinary skill in the art at

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the time the invention was made to incorporate the crosslinkable monomer (C) forming the repeating units (C) is a fluorine-free monomer having at least two reactive groups and/or carbon-carbon double bonds, and the motivation to do so, as suggested by Babirad et al, for the purpose of curing the coating composition, which possesses very low refractive indices and provide optical fibers with improved light accepting and transmitting abilities (C3/L26-58).

Correspondence

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE M. BUIE whose telephone number is (571)270-3879. The examiner can normally be reached on Monday-Thursday with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571)272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MARK EASHOO/
Supervisory Patent Examiner, Art Unit 1796
27-May-08

/N. M. B./
Examiner, Art Unit 1796
5/18/2008